CONFIDENTIAL BUSINESS INFORMATION Chlorinolysis Train 1 2013 T-1002 Transfers and Analytical

Data on Stream g		

BATCH#	DATE	CHLOR. OPER.	START END	VOL (Gal)			Bleach (ppm)	Methanol (ppm)	NTU p	н рь	2 IASES		Bleach (LBS)	Methanol (lbs)	ON/OFFSPEC	Transf. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	Cl2 (avg lb/hr)	Feed (avg gpm)
1	1/2/13	PS	15:55 0:00	11,470		105	0			1.9	Ν	0.2 10.1	0.00		On-Spec						3	7
2	1/7/13	JB	15:45 0:50	12,488		138	7		5	1.9	Ν	0.2 14.4	0.73	0.00	On-Spec						3	7
3	1/10/13	JD	13:50 7:15	9,861	5	50	0		8 3	3.8	Ν	0.4 4.1	0.00		On-Spec						3	7
4	1/12/13	M.Rich	11:00 15:30	10,083		186	0		1	2.9	Ν	2.0 15.7	0.00		On-Spec						5	7
5	1/18/13	JB	0:00 7:00	12,025		218	0		3	1.9	Ν	0.3 21.9	0.00		On-Spec						7	7
6	1/22/13	JD	9:30 18:30	12,025		613	0		8 2	2.0	Ν	0.3 61.5	0.00		On-Spec						7	7
7	1/29/13	M.Rich	17:15 23:15	8,325		650	0		4	1.2	N	0.0 0.0	0.00		On-Spec						25	5
8	2/1/13	JB	4:50 13:45	11,840	2	947	0	_	4	1.1	N	0.2 93.6	0.00		On-Spec						22	5
9	2/2/13	JB	21:30 6:00	12,025	2	784	О		4	1.1	N	0.2 78.7	0.00		On-Spec						22	5
10	2/11/13	PS	8:00 17:30	12,210	3	794	0			1.2	N	0.3 80.9	0.00		On-Spec						25	5
11	2/14/13	M.Rich	4:10 14:00	12,025	3	811	0		3	1.3	N	0.3 81.4	0.00		On-Spec						18	5
12	2/18/13	JD	12:00 19:45	12,025	3	646	0		3	1.1	N	0.3 64.8	0.00		On-Spec						18	5
13	2/22/13	M.Rich	17:00 19:30	7,863	2	1757	<u>C</u>			5.2	N	0.1 115.3	0.00		On-Spec					1	35	4
14	2/23/13	JD	8:30 12:00	9,158		1211	<u>C</u>		47 1		n	0.4 92.5	0.00		On-Spec						35	5
15	2/25/13	JB	21:00 6:00	12,025	2	880	5		10	_	N	0.2 88.3	0.50		On-Spec						24	4
16	2/27/13	PS	13:40 22:00 11:45 20:00	12,025 12,025	5	620 630	3		5		N	0.3 62.2 0.5 63.2	0.00		On-Spec On-Spec			-		-	18 14	5
17	3/4/13	JB PS	15:00 23:00	11,840		561	C		2		n N	0.5 65.2	0.00		On-Spec					-	12	5
18	3/6/13	AJ	18:15 1:35	11,137	2	481	C		4	_	N	0.2 55.4	0.00		On-Spec						10	5
20	3/23/13	AJ	11:15 16:00	7,400	3	496	C		2	_	N	0.2 44.7	0.00		On-Spec						10	5
21	3/25/13	MR	3:20 12:00	12,950	2	669			3	_	N	0.2 72.3	0.00		On-Spec		 				10	6
22	3/27/13	M.Rich	18:00 22:00	11,193		461			11 3		N	0.0 43.1	0.00		On-Spec						14	6
23	3/29/13	AJ	3:10 11:30	12,210	2	658			3	_	N	0.2 67.0	0.00		On-Spec						11	15
24	4/1/13	MR	16:35 0:45	11,655		925	3		4	_	N	0.3 90.0	0.29		On-Spec						25	4
25	4/6/13	JD	17:20 1:00	11,378	3	685			3	_	N	0.0 00.0	0.20		On-Spec		-				21	4
26	4/8/13	JB	19:00 3:15	12,025		735	C		4	_	N	0.2 73.8	0.00		On-Spec						21	4
27	4/12/13	M.Rich	19:00 2:30	9,805	9	193	C		4 2		N	0.8 15.8	0.00		On-Spec		e			1 2	26	5
28	4/15/13	JB	18:30 2:50	12,025	2	587	C		5	_	N	0.2 58.9	0.00		On-Spec						10	7
29	4/22/13	JB	11:30 18:30	12,432	1	497	18		3	_	N	0.1 51.6	1.87		On-Spec						17	6
30	4/24/13	MR	10:15 20:00	9,065	3	96	C		49	_	N	0.2 7.3	0.00		On-Spec						5	7
31	4/29/13	JB	13:30 20:20	12,210	2	375	15		3		N	0.2 38.2	1.53		On-Spec	4					10	6
32	4/30/13	JB	13:30 20:35	12,580	2	423	C		12	1.3	N	0.2 44.4	0.00		On-Spec		8				12	6
33	5/3/13	M.Rich	8:50 12:30	10,638	3	329	C		4	4.5	N	0.2 29.2	0.00	0.00	On-Spec						10	6
34	5/8/13	JB	9:30 17:30	12,025	23	304	13	3	6	1.3	N	2.3 30.5	1.30	0.00	On-Spec						8	6
35	5/10/13	JB	21:00 5:00	12,488	3	296	8		14	1.3	Ν	0.3 30.8	0.00		On-Spec						10	6
36	5/15/13	JB	15:30 22:50	11,840		316	11		3	1.1	Ν	0.1 31.2	1.09		On-Spec						10	6
37	5/17/13	JB	17:30 1:30	12,025	1		C	-	. 3	1.3	Ν	0.1 23.4	0.00		On-Spec						8	7
38	5/23/13	JB	10:30 18:20	12,673	3	271	C		10	_	N	0.3 28.7	0.00		On-Spec						12	7
39	5/24/13	PS	17:20 20:45	9,435		346	C			2.2	Ν	0.0 27.2	0.00		On-Spec						12	5
40	5/30/13	M.Rich	20:00 3:50	11,100			C		2 :		N	0.1 30.8			On-Spec					l.	8	5
41	6/2/13	JB	21:35 5:30				C		2		N	0.6 35.8			On-Spec						9	5
42	6/5/13	M.Rich	13:00 14:00	6,105			6		176		N	0.1 18.0			On-Spec						8	5
43	6/8/13	JB	13:30 20:30	12,950			C	,	20 2		N	2.4 27.0			On-Spec			* "			8	6
44	6/13/13	MR	0:45 7:15	10,175			C		15		N	0.4 22.2			On-Spec						10	6
45	6/17/13	JB	12:20 19:10	12,210				5	3 2		N	0.1 62.4			On-Spec						11	4
46	6/26/13	JB	11:30	3,700			4		455		N	0.2 1.9			On-Spec						5	7
47	6/27/13	AJ	2:25 12:45	12,765			C		41	_	N	0.3 40.6	0.00		On-Spec						8	6
48	7/2/13	JB	15:45 22:50	12,062		472	13	_	7		N	0.1 47.5	1.31		On-Spec						10	6
49	7/11/13	AJ	7:20 15:20	11,692		436	10	_	3		N	0.1 42.5			On-Spec						9	6
50	7/17/13	AJ	12:30 19:45	12,210					14		N	0.3 54.8			On-Spec						14	6
51	7/20/13	JB	17:30 1:00	12,765					4	_	N	0.3 54.6			On-Spec				1		14	7
52	7/24/13	AJ	10:20 16:10	9,694			(12		N	11.2 34.7			On-Spec				-		15	6
53	7/26/13	JB	10:10 18:00			446	11		3 2		N	0.1 48.2	1.19		On-Spec						17	6
54	7/29/13	JB	11:15 19:30	12,950			18		3		N	0.2 53.4	1.95		On-Spec					 	15	6
55	8/13/13	JB	21:05 5:30	12,950	1	443			71	1.2	N	0.1 47.9	0.00	0.00	On-Spec						10	6

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Analytic	cal Data	on Stre	am goi	ng f	from T-100	1 to T-	1002															
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BATCH#	DATE	CHLOR. OPER.		END	VOL (Gal) (pp		Bleach	Methanol	NTU	- LU	2 PHASES		TOC (LBS)	Bleach (LBS)	Methanol ON/OFFSPE (lbs)	C Transf. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	CI2 (avg lb/hr)	Feed
56	8/15/13	JB		9:45		3 421		(ppm)	15	<u>рп</u> 1.2		0.3	45.5	0.00	0.00 On-Spec						(avg ib/nr) 13	(avg gpm)
57	8/19/13	JB	10:45 1			2 435			75	1.2	 	0.2	43.0	0.00	0.00 On-Spec			 			9	6
58	8/21/13	JB		1:25	12,210	2 319			63	1.3		0.2	32.5	0.00	0.00 On-Spec						7	6
59	8/23/13	AJ	12:30 2		12,303	3 518	3 23		25	1.2	N	0.3	53.2	2.36	0.00 On-Spec			1			9	4
60	8/29/13	JB		1:45	12,025	3 646			140	1.2	N	0.3	64.8	0.00	0.00 On-Spec						13	5
61	9/4/13	AJ		1:20	9,990	2 509			143	1.1	N	0.2	42.4	1.75	0.00 On-Spec						10	6
62	9/7/13	MR	14:00 2		10,157	5 560			62	1.2		0.4	47.5	1.19	0.00 On-Spec						12	5
63	9/13/13	JB	15:00 2		12,765	3 347			78	1.2		0.3	37.0	1.92	0.00 On-Spec						13	6
64	9/19/13	AJ		0:15	11,396	2 320						0.2	30.4	1.33	0.00 On-Spec					ļ	9	6
65	9/22/13	MR	11:30 1		12,025	2 452			10	2.0		0.2	45.4 32.1	0.00	0.00 On-Spec						13	6
66	9/25/13 9/26/13	AJ AJ	14:45 2 22:10	6:00	11,415 12,395	4 337 2 461			17	2.1		0.3	47.7	1.62 0.00	0.00 On-Spec 0.00 On-Spec						10 10	6
68	9/29/13	JD		3:30	9,990	9 229			1/	3.3		0.2	19.1	0.00	0.00 On-Spec			-		 	7	7
69	9/30/13	JB		9:00	12,025	6 396			28	0.5	_	0.6	39.7	0.00	0.00 On-Spec			_			12	6
70	10/3/13	MR		5:00	12,025	1 365			48	0.4		0.1	36.6	1.40	0.00 On-Spec		<u> </u>				11	6
71	10/10/13	JB	1:15 1		12,173	3 448			43	0.5		0.3	45.5	3.45	0.00 On-Spec						14	7
72	10/11/13	AJ	15:10 2		11,100	8 307			194	2.0		0.7	28.4	2.32	0.00 On-Spec						10	6
73	10/13/13	JD	14:00 2	0:30	12,395	2 379			61	0.3		0.2	39.2	2.79	0.00 On-Spec						10	6
74	10/14/13	JB	15:05 2		11,840	3 320	35		7	0.4	n	0.3	31.6	3.46	0.00 On-Spec						10	7
75	10/16/13	JB		2:10	12,025	1 234			4	0.6	N	0.1	23.5	0.00	0.00 On-Spec						10	7
76	10/18/13	AJ		1:30	12,839	1 283		·	67			0.1	30.3	3.11	0.00 On-Spec						10	7
77	10/24/13	JB		8:30	12,950	1 442			27	0.8		0.1	47.8	0.00	0.00 On-Spec						10	. 7
78	10/30/13	JB	13:00 1			17 428			646	2.5		2.4	58.3	3.27	0.00 On-Spec			ļ			14	5
79	10/31/13	JB	11:40 2		12,081	5 216			114	1.1		0.5	21.8	2.72	0.00 On-Spec			ļ	.	<u> </u>	10	7
80	11/3/13 11/10/13	JB JB		3:15 0:00	12,025 11,896	1 443	-		9	0.9 1.0		0.1	44.5 40.9	0.00 2.48	0.00 On-Spec			<u> </u>			10	5 6
81 82	11/10/13	AJ	16:55 2		9,509	1 228			18	1.2	 	0.2	18.1	0.87	0.00 On-Spec 0.00 On-Spec			 			<u>11</u> 9	7
83	11/15/13	JD		4:20	9,990	6 639			254	6.3		0.1	53.3	0.83	0.00 On-Spec		-	<u> </u>		1	18	5
84	11/16/13	JD		0:35	11,692	3 399			163	1.1		0.3	38.9	1.46	0.00 On-Spec		<u> </u>	1		<u> </u>	12	5
85	11/20/13	JB		2:45	12,395	1 214			132	1.4		0.1	22.1	0.00	0.00 On-Spec						5	6
86	11/21/13	AJ		2:45	12,210	1 254	1 9		343	1.2	N	0.1	25.9	0.92	0.00 On-Spec			1			8	6
87	11/23/13	JB	6:35 1	6:05	12,025	2 250	0		80	1.4	N	0.2	25.1	0.00	0.00 On-Spec						8	6
88	11/25/13	AJ	9:50 1		10,915	1 19 ⁻			6	1.5	N	0.1	17.4	0.00	0.00 On-Spec						7	6
89	11/26/13	JB		4:45	11,341	1 197			10	1.5		0.1	18.6	0.00	0.00 On-Spec						7	7
90	11/27/13	AJ		0:45	11,933	1 22			5	1.6		0.1	22.0	0.00	0.00 On-Spec			-			7	7
91	12/3/13	JB	7:00 1		12,025	2 298			11	1.3		0.2	29.9	0.00	0.00 On-Spec			1			7	7
92	12/6/13	JB		8:30		1 227		L	187	1.4		0.1	23.2		0.00 On-Spec			 		 	10	7
93	12/8/13	AJ		1:55		2 254				1.3		0.2	23.0		0.00 On-Spec 0.00 On-Spec			 			10	7
94 95	12/9/13 12/11/13	JB MR	17:00 10:00 1			1 285			319			0.1	28.6 9.5		0.00 On-Spec			 			10 9	. 7 6
96	12/11/13	JB	21:00			63 454			276			6.8	49.1	0.00	0.00 On-Spec		+	<u> </u>			9	5
97	12/11/13	MR		8:30		4 86						0.8	6.8		0.00 On-Spec					 	3	7
98	12/19/13	JB	17:30			1 229						0.5	23.7		0.00 On-Spec		-	+	-		<u>5</u>	8
99	12/20/13	JB	17:40 2			5 203			119			0.4	17.2		0.00 On-Spec						7	7
100	12/21/13	AJ	14:00 1			4 150				5.2		0.2	7.3		0.00 On-Spec				<u> </u>		8	7
101	12/21/13	MR	21:45			2 283						0.2	28.4		0.00 On-Spec			1			8	7
102	12/23/13	MR	3:15 1			1 234				1.3		0.1	23.6	1.31	0.00 On-Spec						8	7
103	12/26/13	JB	5:00 1			1 169				1.5		0.1	16.0		0.00 On-Spec						7	7
104	12/27/13	JB	21:00	7:20	12,395	3 173	3 0		13	1.4	N	0.3	17.9	0.00	0.00 On-Spec						5	8

CONFIDENTIAL BUSINESS INFORMATION Chlorinolysis Train 1 2014 T-1002 Transfers and Analytical

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			START END				Methanol		2					ON/OFFSPEC	Transf. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	Cl2	Feed
BATCH#	DATE	OPER.	TIME TIME			ppm) (ppm)	(ppm)		H PHASES	(LBS)	(LBS)		(lbs)			At .				(avg lb/hr)	(avg gpm)
1	12/30/13_	MR	20:00 0:15	3,293			0		5.6 N	0.1	1.5	0.00		On-Spec			<u> </u>			14	5
2	1/4/14	JB	17:00 1:45	11,470	1		0		1.4 N	0.1	26.4	0.00		On-Spec					ļ	7	7
3	1/6/14	MR	21:15 8:20	12,081	1		2	115		0.1	19.5	1.21		On-Spec						7	7
4	1/11/14	JB	7:05 18:00	12,025			0	5		0.2		0.00		On-Spec			-			7	7
5	1/13/14	JB JB	20:15 6:35 11:00 19:00	12,044			2		1.3 N 1.3 n	0.2		1.21 3.32		On-Spec On-Spec	 		 			11	7
6 7	1/19/14 1/21/14	M.Rich	14:00 22:45	12,044 10,730			0		1.3 n 1.4 N	0.2	49.5	0.00		On-Spec			 			14	6
8	1/25/14	JD	13:00 20:15	10,730			9		1.5 N	0.1		1.68		On-Spec					 	14	5
9	1/28/14	JB	21:35 7:30	12,950		574	öl	11		0.1		0.00		On-Spec					-	16	4
10	2/3/14	JD	4:30 13:30	9,565			ol		1.3 n	0.0		0.00		On-Spec						12	5
11	2/4/14	JD	8:30 18:30	11,822		533	0		1.3 N	0.1	52.6	0.00		On-Spec			1			14	5
12	2/7/14	AJ	15:10 1:30	12,950		665	0	125	1.3 N	0.2	71.9	0.00		On-Spec						16	6
13	2/9/14	JD	13:15 23:05	11,748		445 1	1		1.5 N	0.1	43.6	1.08		On-Spec						20	6
14	2/11/14	JD	22:00 6:50	12,395		431	0	19		0.1	44.6	0.00		On-Spec						16	6
15	2/12/14	JD	19:00 6:40	12,950		306	0	12		0.2		0.00		On-Spec						12	6
16	2/13/14	JB	23:30 3:00	8,510		288	0		3.3 N	0.5		0.00		On-Spec						13	7
17	2/15/14	AJ	14:30 1:00	12,950		337	0	15		0.6		0.00		On-Spec					1	14	7
18	2/18/14	JD	7:00 15:30	11,914			4		1.4 n	0.2		1.39		On-Spec					<u> </u>	10 3	11 7
19	2/19/14 2/21/14	JB MR	8:30 16:00 9:30 19:20	7,585 12,025		101 259	0		3.3 N 1.3 N	0.3		0.00		On-Spec On-Spec						10	7
20 21	2/21/14	MR	12:30 17:00	9,805			21		2.7 N	3.6		1.72		On-Spec			1			17	5
22	2/25/14	AJ	13:25 20:20	10,897			31		1.4 n	0.3		2.82		On-Spec	 					12	6
23	2/26/14	AJ	14:10 0:00	11,748			25		1.5 n	0.9		2.45		On-Spec						13	6
24	2/28/14	JD	21:30 3:00	11,563			1		1.3 n	0.5		1.06		On-Spec						10	7
25	3/1/14	JB	19:10 1:30	12,025		263	0		1.4 N	0.3		0.00		On-Spec						8	6
26	3/4/14	AJ	10:35 15:50	5,439		142	0	417	5.8 N	0.5		0.00		On-Spec						7	7
27	3/5/14	MR	2:45 11:30	12,599			3		1.6 N	7.6		1.34		On-Spec						7	. 6
28	3/6/14	AJ	22:35 5:05	11,896		282	0		1.4 N	0.2		0.00		On-Spec						4	7
29	3/14/14	AJ	23:25 7:30	12,876		357	0		1.2 N	0.3		0.00		On-Spec						10	7
30	3/16/14	JD	17:12 22:45	9,805		367	8		2.5 n	0.9		0.65		On-Spec					· · · · · · · · · · · · · · · · · · ·	12	5
31	3/17/14	MR JB	10:30 16:50 18:15 23:20	11,840 7,215		381 85	0		0.7 N 2.8 N	0.1	37.6 5.1	0.00		On-Spec On-Spec	 		 	·		15 5	6
32 33	3/18/14 3/19/14	AJ	22:00 4:00	11,988		269			1.0 N	0.6		0.00		On-Spec						10	7
34	3/23/14	AJ	18:55 0:30	10,601			38		0.8 N	0.0		3.36		On-Spec			-		1	11	6
35	3/25/14	MR	8:45 15:30	12,950		355	0		0.7 N	0.8		0.00		On-Spec					1	11	6
36	3/28/14	AJ	21:40 3:15	10,638			33		0.6 N	0.1	41.9	2.93		On-Spec						13	5
37	3/30/14	JD	8:40 15:00	11,877			24	8	0.7 N	0.8		2.38		On-Spec						6	3
38	4/3/14	MR	22:00 8:00	11,100	1	353	0		1.1 N	0.1	32.1	0.00	0.00	On-Spec						11	6
39	4/4/14	JB	2:45	12,266			2	42		0.1				On-Spec						10	6
40	4/8/14	JB	14:30 20:00	12,081			20	298		0.2				On-Spec						10	6
41	4/16/14	AJ / KM	22:00 2:50	10,730			6	49		0.6				On-Spec			ļ <u></u>			5	6
42	4/17/14	AJ	20:20 2:00	12,395			4	14		0.4				On-Spec		ļ			+	6	7
43	4/22/14	MR	3:00 10:00	9,509			21	114		0.2				On-Spec	ļ				+ -	8	6
44	4/24/14	JB JD / KM	13:15 17:45	10,934			25 34	218		0.2		2.28 3.40		On-Spec On-Spec				 	-	15 10	6 3
45 46	4/25/14 5/8/14	JD / KM AJ	17:50 23:05 11:30 20:30	11,970 11,387		706	0		1.2 N	0.7		0.00		On-Spec			1		+	10	3
46	5/6/14	JB	18:15 22:45	11,655		638	0		1.2 N	0.8				On-Spec					+	16	4
48	5/16/14	AJ	23:35 8:20	9,768			59		1.1 N	0.6				On-Spec		1	•			12	9
49	5/18/14	KLM	6:35 11:30	9,176			11		2.9 N	0.9				On-Spec					† †	16	4
50	5/19/14	AJ	22:20 3:40	11,914			95		0.8 N	1.9				On-Spec					1	17	3
51	5/23/14	MR	14:45 18:40	8,473			0		0.8 N	0.6				On-Spec						17	3
52	5/30/14	JB	1:25 6:25	11,285		1169	0	639			110.1	0.00		On-Spec						23	3
53	6/3/14	JF/KLM	13:30 16:00	5,421		767	2		5.6 n	0.0				On-Spec						19	5
54	6/5/14	JB	20:30 1:00	10,175		455	0	412		0.4				On-Spec			ļ			19	6
55	6/6/14	JB	16:45 21:30	11,655	3	750	이	89	0.8 N	0.3	72.9	0.00	0.00	On-Spec		l	l <u>.</u>			14	3

Dow Chemical Pittsburg, California

CONFIDENTIAL BUSINESS INFORMATION Chlorinolysis Train 1

2014 T-1002 Transfers and Analytical

Section Control Cont	Analytic	cal Data	on Stre	am going f	rom T-	1001	to T-	1002																
Section 1974 40 100c 2 20 1470 3 758 0 141 2.6 N 0.0 72.5 0.00			CHLOR.	START END					Methanol						Bleach	Methanol	ON/OFFSPEC	Transf. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	Cl2	Feed
Fr									(ppm)															(avg gpm)
Tell																								4
ST ST ST ST ST ST ST ST																			· · · · · · · · · · · · · · · · · · ·	-				
0.0 0.0											_	• • • • • • • • • • • • • • • • • • • •						nH	9	<u> </u>				
67 662911 Al 1939 2530 9491 2 244 0 770 30 N D2 193 0000 1000										120	_								<u> </u>					
\$\frac{6}{3} & \frac{6}{2}\frac{1}{4} & \$\frac{1}{10} \frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{10} \frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{2}\frac{1}{4} & \$\frac{1}{2}\frac{1}{4}\frac{1}{4}\frac{1}{4} & \$\frac{1}{2}\frac{1}{4}\f										710												<u> </u>		7
63 62514 2.01 12.25 17.60 10.60 16 300 7 464 25 N 18 352 0.65 0.00 0.05 0.00						8							0.8										14	2
68 629914 JO 1400 9200 0.197 S 3892 O 148 D N D 298 D D D D D D D D D	63	6/25/14	JD			16				444	2.5	N	1.5										16	5
Fig. 60,000 10,			KLM			7																		
67 680014 JB 146 415 5738 4 840 87 340 0.6 n 0.2 40.8 321 0.000 mSpace 6 6 1 1 1 1 1 1 1 1			1																.			ļ		
68 7/11/4 K.M 1250 7/10 11/285 2 10/41 0 24 0.0 N 0.2 9/83 0.00																0.00	On-Spec							
Fig. Table																						_		3
70 78914 10 1600 1910 7,130 2 900 31 188 0.8 N 0.1 53.5 1.84 0.00																		<u> </u>				-		1 1
T1																					***************************************			+ 7
73 86714 AJ 620 900 10.360 2 996 20 64 1,1 N 0.1 86.1 1.73 0.00 0.00 0.05gec 19 4 73 86.1 1.15 1.159 1								•													+			6
73											_													
T4											_													3
75 82014 JD 14:00 16:10 9,168 11 799 38 28 10 N 0.8 61.1 2.20 0.00										226	1.0												17	5
77 825/14 JD 2100 340 5.180 205 0 6.7 N 0.0 8.9 0.00			JD				799	38		25	1.0	N	0.8	61.1	2.90								16	5
78 8269/14 KLM 21.95 14.95 10.000 13 758 0 91 0.9 N 1.1 8.33 0.00 0.000 0.90	76		JD								12.6	n	0.0	34.1									12	6
Typ																								
80 98/14 JF 2000 2305 7,400 70 655 30 1167 12 N 4.3 40.5 1.85 0.00																								
81 91/21/4 AJ 11:00 14:30 8.473 10 996 28 15 1.1 N 0.7 49:2 1.84 0.00 0.00 0.00 0.00 0.00 0.99ec 11 4 4 4 4 7:50 6.53 3 516 19 94 1.1 N 0.2 28.1 1.04 0.00 0.00 0.00 0.00 0.99ec 11 4 4 4 4 7:50 6.53 3 516 19 94 1.1 N 0.2 28.1 1.04 0.00 0.00 0.00 0.99ec 16 6 2 2 2 2 2 2 2 1 2 1 3 2 2 2 2 2 2 2 2 2																		<u> </u>						
R2 917174 KLM 11:50 14:50 6:993 5 538 0 226 12 N 0.3 31:4 0.00										+									<u> </u>				<u> </u>	
83 92/1/4 AJ 445 750 6.531 3 516 19 94 1.1 N 0.2 28.1 1.04 0.00 0.05pec 1.2 3.8 3.9																		 		 				
84 9924114 JF 2015 100 11,100 850 0 117 0 0 78,7 0,00						3													· · · · · · · · · · · · · · · · · · ·					
85 10/2714 KLM 14/15 21/00 9,998 81 945 35 231 1.2 N 6.7 78.1 2.99 0.00 0.00 0.5pec 10 0.3 1.2						 					'''	- ' '												+
B6											1.2	N											10	3
88 10/21/14 KLM 21:05 2:10 10,813 12 380 0 283 0.9 N 1.1 34.3 0.00 0.00 On-Spec 9 11 4 89 10/25/14 AJ 9:20 13:55 11,359 5 9:3 45 176 0.7 N 0.8 69.3 7.33 0.00 On-Spec 9 15 4 91 10/20/14 AJ 8:20 15.55 11,599 5 92.3 45 176 0.7 N 0.5 87.5 4.08 0.00 On-Spec 9 115 4 N 1.1 4 4.9 1.1 N 1.6 66.0 0.00 On-Spec 9 1.1 4 1.1 N 1.6 66.0 0.00 On-Spec 9 9 1.1 3 3 1.1 1.1 4 4.1 1.1 1.1 1.2 0.00 On-Spec 9 9 7 9 1.1 3 1.2											1.0		6.0	97.9		0.00	On-Spec						9	2
89 10/25/14 AJ 20:05 10:5 12:025 8 691 73 50 1.0 N 0.8 693 733 0.00 On-Spec N 13 3 3 3 3 10/25/14 AJ 8/14 AJ 20:05 11:395 5 923 43 176 0.7 N 0.5 87:5 4.08 0.00 On-Spec N 15 4 4 4 4 4 4 4 4 4	87	10/16/14		1:00 6:00		2						N	0.2										9	3
90 10/29/14 AJ 8/LM 9:20 13:55 11,359 5 923 43 176 0.7 N 0.5 87.5 4.08 0.00 On-Spec						12				283	0.9	N												
91 10/30/14 AJ. & KLM 9:00 0:50 11,698 169 666 0 130 1.0 N 16.5 6.50 0.00 0.00 On-Spec 133 3 3 3 3 3 11/7/14 AJ. 8:45 1.203 107 200 3 47 11.8 N 1.1 2.0 0.03 0.00 On-Spec 16 3 3 3 3 3 11/7/14 AJ. 8:45 1.203 107 200 3 47 11.8 N 1.1 2.0 0.03 0.00 On-Spec 130						8						<u> </u>												3
92 11/5/14 M.Rich 9:50 15:45 12:765 134 1334 0 65 1.4 N 14.3 142:1 0.00 0.00 On-Spec 9 16 3 3 11/7/14 AJ 8:45 1.203 107 200 3 47 11.8 N 1.1 2.0 0.03 0.00 On-Spec 9 9 7 11/7/14 JD 6:50 11:50 12:136 20 1304 34 54 1.1 N 2.0 132:1 3.44 0.00 On-Spec 9 11/19/14 JD 18:00 0:00 8.695 87 698 186 95 1.5 n 6.3 50.6 13:50 0.00 On-Spec 9 18 8 9 9 11/24/14 JF 22:00 2:40 11,100 47 1424 35 28 1.1 N 4.3 1319 3.24 0.00 On-Spec 9 1 12/24/14 JD 18:00 0:00 9.324 28 376 14 22 1.9 n 2.2 23 1.09 0.00 On-Spec 9 1 12/24/14 JD 19:00 22:00 9.324 28 376 14 22 1.9 n 2.2 23 1.09 0.00 On-Spec 9 1 15 6 98 12/11/14 KLM 23:2 2:30 7.770 7 10:89 0 8 1.1 N 4.3 1319 3.24 0.00 On-Spec 9 1 30 66 99 12/41/14 JD 19:00 22:00 9.805 13 675 0 61 1.2 n 1.1 55.2 0.00 0.00 On-Spec 9 1 30 66 10 12/61/14 JD 19:00 22:00 9.805 13 675 0 61 1.2 n 1.1 55.2 0.00 0.00 On-Spec 9 1 22/24/14 JF 20:00 2:00 11.108 14 701 0 13 1.0 N 1.3 66.6 0.00 0.00 On-Spec 9 1 22/24/14 JF 11:15 16:20 12:044 30 813 3 10 1.0 N 1.3 66.6 0.00 0.00 0n-Spec 9 1 22/24/14 JF 20:00 2:00 11.082 8 626 25 19 0.9 N 0.7 57.9 2.31 0.00 On-Spec 9 1 22/24 5 5 102 12/9/14 AJ 11:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 22/4 5 5 103 12/10/14 JD 13:35 18:20 11.063 7 818 49 6 0.7 N 0.6 75.5 4.52 0.00 0n-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:044 30 813 3 10 1.0 N 3.0 817 0.30 0.00 On-Spec 9 1 17:15 16:20 12:04 1.00 0.00 0.00 0n-Spec 9 1 17:15 17:15 17:15 17:15 18:15 17:15 18:15 17:15 18:15 17:15 18:15 17:15 18:1																								<u> </u>
93 1177/14 AJ 8.45 1,203 107 200 3 47 11.8 N 1.1 2.0 0.03 0.00 On-Spec 9 7 94 11/17/14 JD 18:00 0:00 8,695 87 698 186 95 1.5 n 6.3 50.6 13.50 0.00 On-Spec 18 5 96 11/29/14 JF 22:00 2:40 11,100 47 1424 35 28 1.1 N 4.3 13.19 3.24 0.00 On-Spec 18 28 3 97 11/24/14 JD 18:00 22:00 9.324 28 376 14 22 1.9 n 2.2 29.3 1.09 0.00 On-Spec 28 3 98 12/1414 JD 19:00 22:00 9.805 13 675 0 61 1.2 n 1.1 55.2 0.00 On-Spec 9 12/14 JD 19:00 51:105 11:08																								3
94 11/17/14 JD 6:50 11:50 12:136 20 1304 34 54 1.1 N 2.0 132.1 3.44 0.00 On-Spec									<u> </u>													1		1 7
95																				† • • • • • • • • • • • • • • • • • • •	1			2
96																		 						5
97 11/24/14 JD 18:00 22:00 9,324 28 376 14 22 1.9 n 2.2 29.3 1.09 0.00 On-Spec																		1				<u> </u>		3
98																				Ì				6
99 12/4/14 JD 19:00 22:00 9,805 13 675 0 61 1.2 n 1.1 55.2 0.00 0.00 On-Spec 100 12/6/14 JD 0:35 11:05 11;385 14 701 0 133 1.0 N 1.3 66.6 0.00 0.00 On-Spec 101 12/7/14 JF 20:00 2:10 11;082 8 626 25 19 0.9 N 0.7 57.9 2.31 0.00 On-Spec 102 12/9/14 AJ 11:15 16:20 12,044 30 813 3 10 1.0 N 3.0 81.7 0.30 0.00 On-Spec 103 12/10/14 JD 13:35 18:20 11;063 7 818 49 6 0.7 N 0.6 75.5 4.52 0.00 On-Spec 104 12/12/14 JD 20:00 23:35 4,200 61 354 0 60 3.7 N 2.1 12.4 0.00 0.00 On-Spec 105 12/13/14 JD 22:10 3:15 11;215 45 589 33 44 0.7 N 4.2 55.1 3.09 0.00 On-Spec 106 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 107 12/16/14 KLM 17:05 23:00 12:59 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 108 12/17/14 KLM 17:05 23:05 12:99 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec									• • • • • • • • • • • • • • • • • • • 					70.6	0.00	0.00	On-Spec						30	6
101 12/7/14 JF 20:00 2:10 11,082 8 626 25 19 0.9 N 0.7 57.9 2.31 0.00 On-Spec 102 12/9/14 AJ 11:15 16:20 12,044 30 813 3 10 1.0 N 3.0 81.7 0.30 0.00 On-Spec 21 5 103 12/10/14 JD 13:35 18:20 11,063 7 818 49 6 0.7 N 0.6 75.5 4.52 0.00 On-Spec 17 8 104 12/12/14 JD 20:00 23:35 4,200 61 354 0 60 3.7 N 2.1 12.4 0.00 On-Spec 16 8 105 12/13/14 JD 22:10 3:15 11,215 45 589 33 4 0.7 N 4.2 55.1 3.09 0.00 On-Spec 15	99	12/4/14	JD	19:00 22:00						61	1.2	n											21	5
102 12/9/14 AJ 11:15 16:20 12,044 30 813 3 10 1.0 N 3.0 81.7 0.30 0.00 On-Spec 21 5 103 12/10/14 JD 13:35 18:20 11,063 7 818 49 6 0.7 N 0.6 75.5 4.52 0.00 On-Spec 17 8 104 12/12/14 JD 20:00 23:35 4,200 61 354 0 60 3.7 N 2.1 12.4 0.00 0.00 On-Spec 16 8 105 12/13/14 JD 22:10 3:15 11,215 45 589 33 4 0.7 N 4.2 55.1 3.09 0.00 On-Spec 16 8 105 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 15 9	100																							6
103 12/10/14 JD 13:35 18:20 11,063 7 818 49 6 0.7 N 0.6 75.5 4.52 0.00 On-Spec 104 12/12/14 JD 20:00 23:35 4,200 61 354 0 60 3.7 N 2.1 12.4 0.00 0.00 On-Spec 105 12/13/14 JD 22:10 3:15 11,215 45 589 33 4 0.7 N 4.2 55.1 3.09 0.00 On-Spec 106 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 107 12/16/14 KLM 17:45 2:45 10,638 8 236 0 6 1.3 N 0.7 21.0 0.00 0.00 On-Spec 108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14											_											ļ		5
104 12/12/14 JD 20:00 23:35 4,200 61 354 0 60 3.7 N 2.1 12.4 0.00 0.00 On-Spec 105 12/13/14 JD 22:10 3:15 11,215 45 589 33 4 0.7 N 4.2 55.1 3.09 0.00 On-Spec 106 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 107 12/16/14 KLM 17:45 2:45 10,638 8 236 0 6 1.3 N 0.7 21.0 0.00 On-Spec 108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec											_							<u> </u>			1	ļ		5
105 12/13/14 JD 22:10 3:15 11,215 45 589 33 4 0.7 N 4.2 55.1 3.09 0.00 On-Spec 106 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 107 12/16/14 KLM 17:45 2:45 10,638 8 236 0 6 1.3 N 0.7 21.0 0.00 On-Spec 108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec																						 		
106 12/15/14 JD 21:40 1:00 8,325 68 419 22 22 1.2 n 4.7 29.1 1.53 0.00 On-Spec 107 12/16/14 KLM 17:45 2:45 10,638 8 236 0 6 1.3 N 0.7 21.0 0.00 On-Spec 108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec											_							+		 	 	<u> </u>		
107 12/16/14 KLM 17:45 2:45 10,638 8 236 0 6 1.3 N 0.7 21.0 0.00 On-Spec 12 7 108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 12 7 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec 12 7																				-	 	 		
108 12/17/14 KLM 17:05 23:00 12,599 31 98 0 114 8.5 n 3.3 10.3 0.00 On-Spec 109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec																		 			+		L	7
109 12/18/14 AJ 18:20 23:55 12,099 3 342 14 12 1.3 N 0.3 34.5 1.41 0.00 On-Spec 12 7												1						<u> </u>			1			7
		_									_							· · · · · · · · · · · · · · · · · · ·				†		7
ין דוט ן הבובטודין רדט ן טידטן ודויטבבן טן טטטן בוזן ווייטבן ואין טיטן טטטן בנסטן טיטן ביסטן טיטטן טיטטן ביסטן	110	12/20/14	AJ	3:40 8:45			355																11	6

Dow Chemical Pittsburg, California

Chlorinolysis Train 1

2014 T-1002 Transfers and Analytical

Analyti	cal Data	on Stre	am go	oing	from T-	1001	to T-	1002																
	Ι	CHLOR.	START	FND		F	тос	Bleach	Methanol	T		2	F	тос	Bleach	Methanol	ON/OFFSPEC	Transf. Procedure	Oper, Conditions	Processing	Other Comments	Mixing	CI2	Feed
BATCH #	DATE				VOL (Gal)	(ppm)					рН	PHASES	(LBS)			(lbs)			•	1			(avg lb/hr)	(avg gpm)
111	12/21/14	JD		23:00			310			9	1.2	? n	0.6	29.9	0.00	0.00	On-Spec						5	7
112	12/22/14	JF	11:30	18:00	11,766	24	48	0		20	2.8	n	2.4	4.7	0.00	0.00	On-Spec						5	7
113	12/23/14	JB	7:00	12:15	12,025	3	169	O		5	1.5	N	0.3	17.0	0.00	0.00	On-Spec						5	7
114	12/25/14	KLM	23:30	4:00	10,138	29	298	C		47	1.2	? n	2.5	25.2	0.00	0.00	On-Spec						5	7
115	12/26/14	JD	14:05	19:15	12,044	7	280	48		10	1.3	B N	0.7	28.1	4.82	0.00	On-Spec						5	7

Chlorinolysis Train 1 2015 T-1002 Transfers and Analytical

Analytical Data on Stream going from T-1001 to T-1002

									T	Γ _	I = I = -				I 2 - 	.	-	<u> </u>	T 		
			START		WOL (O-1)	F TOC				2	F TO			Methanol ON/OFFSPEC	Transt. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	CI2	Feed
BATCH#	DATE	OPER.				(ppm) (ppm		(ppm)			(LBS) (LBS		4.46	0.00 On-Spec			 			(avg lb/hr)	(avg gpm)
1	1/5/15	JF M.Rich	13:45	13:35	9,380 11,193	28 9 10 14	9 57 2 21		108 3.7		0.9 13		1.96	0.00 On-Spec			+			5	7
3	1/9/15 1/13/15	AJ AJ	2:15		12,358	4 40			6 1.2		0.9 13		2.06	0.00 On-Spec			+			6	7 7
4	1/16/15	JF		5:15	11,396	12 46			4 1.3		1.1 44		0.00	0.00 On-Spec	<u> </u>		+			10	5
5	1/17/15	KLM/AJ	15:35		9,805	4 12			50 2.9				0.00	0.00 On-Spec		 				10	5
6	1/18/15	AJ	17:00		4,163	3 10			53 11.3				0.31	0.00 On-Spec						9	7
7	1/21/15	AJ	20:45		10,767	5 35			54 1.4		0.4 32		2.25	0.00 On-Spec			1	†		12	6
8	1/24/15	KLM	10:50		9,491	64 11		1	12.0				0.00	0.00 On-Spec		†	1			5	6
9	1/25/15	AJ	11:00		11,785		1 (i e	3 1.2	•	1.3 40		0.00	0.00 On-Spec			1			16	6
10	1/26/15	KLM	19:55		11,581	5 31	6 (0 1.4	N	0.5 30		0.00	0.00 On-Spec					1. 1	11	6
11	1/28/15	JB	10:30		6,475	113 12	8 (20 12.3	N	6.1	.9 (0.00	0.00 On-Spec						6	7
12	2/6/14	PS	10:00	12:50	4,255	17 33	2 106	6	880 5.9	N	0.6 11	.8] 3	3.76	0.00 On-Spec						14	6
13	2/7/15	JF	23:05	4:00	11,738	18 74	7 12	2	301 1.3	N N	1.8 73		1.18	0.00 On-Spec						12	3
14	2/13/15	AJ	15:20	18:15	6,938	3 66			4 1.4	N	0.2 38		0.00	0.00 On-Spec						3	12
15	2/14/15	AJ	21:45					2	65 1.2		0.1 37		1.17	0.00 On-Spec						12	4
16	2/16/15	KLM	10:45)	170 1.3	-	9.0 53		0.00	0.00 On-Spec					<u></u>	12	4
17	2/17/15	JF	23:15					<u> </u>	184 10.9		2.0 14		0.50	0.00 On-Spec			1		ļ	6	8
18	2/20/15	JB		11:30		5 107		1	3 1.2		0.5 105		0.00	0.00 On-Spec			<u> </u>		ļ	16	3
19	2/23/15	AJ	4:30			30 118			117 1.3		2.8 113		2.58	0.00 On-Spec		1	+		-	20	3
20	2/27/15	KLM	18:55		12,081	11 112)	357 1.5		1.1 112		0.00	0.00 On-Spec			 			21 17	3
21	3/3/15	JF	19:05		8,399	28 94		1	84 1.5		2.0 66		0.07	0.00 On-Spec	pH	 		 	+	18	3
22	3/10/15	JF IF	10:30			88 76		·	139 1.6	+	6.6 57 0.3 127		1.05 0.00	0.00 On-Spec 0.00 On-Spec	lbu I	 	-		 	18	3
23	3/12/15 3/15/15	JF M.Rich	11:20 18:30					' 	119 1.0 239 12.8		0.3 127 1.6 88		0.08	0.00 On-Spec			+		 	20	3
24 25	3/15/15	JB	23:00					\	1 1.	+	0.6 55		0.00	0.00 On-Spec		<u> </u>	+		-	22	5
26	3/10/15	KLM		14:15				<u> </u>	92 1.2		10.7 44		1.13	0.00 On-Spec		 			 	23	5
27	3/29/15	JF	3:35			28 69		1	57 1.2		2.1 52		0.00	0.00 On-Spec					 	16	4
28	4/4/15	JF	0:45						27 1.4		3.1 59		0.00	0.00 On-Spec	,				†	17	4
29	4/11/15	JF	21:05						16 1.4	l N	2.6 36		0.00	0.00 On-Spec			+			14	4
30	4/13/15	JF	21:20						10 1.	3 N	1.0 22		0.00	0.00 On-Spec		1			1	13	5
31	4/15/15	AJ		7:30				5	272 12.0	S N	0.7 44		0.45	0.00 On-Spec						15	6
32	4/17/15	M.Rich	13:15	18:35	11,914	2 7	14 2 ⁻	ı e	45 1.	2 N	0.2 7	.0 2	2.09	0.00 On-Spec						16	4
33	4/22/15	KLM		11:45			50 :	3	41 12.0) N	6.1 29		0.20	0.00 On-Spec						18	7
34	4/28/15	JF		12:54					6 1.	2 N	3.2 52		0.00	0.00 On-Spec						14	5
35	5/1/15	JB		18:40		15 20			202 12.		1.4 19		0.00	0.00 On-Spec				ļ		9	7
36	5/2/15	JB	~~	15:30					19 0.8		0.4 68		0.00	0.00 On-Spec						14	4
37	5/4/15	KLM	23:40)	96 1.		2.2 86		0.00	0.00 On-Spec		<u> </u>			ļ	15	3
38	5/7/15	JF	15:00			3 10		3	22 1.1	+	0.2 87		0.52	0.00 On-Spec			+			23	4
39	5/16/15	M.Rich	9:00	_				1	12 2.		0.8 49	_	0.00	0.00 On-Spec		 	1			22	6
40	5/18/15			10:40				2	52 7.		0.6 47		0.17			 		 		66 33	4
41	5/19/15	M.Rich	23:45 17:10					<u> </u>	4 0. 5 1.		0.4 17		0.00 2.57		+	 	+	 	+	24	5
42	5/26/15 5/30/15	J.Guzman AJ		23:55			38 2		4 0.		0.1 6		2.11		 	1	+	+	+	26	6
43	6/8/15	JF	1:20				17 2		5 0.		0.1 6		2.21	0.00 On-Spec	 	+	+		+	19	5
45	6/9/15	JG		18:20			22		5 1.		0.1 5		0.00	0.00 On-Spec	1	1	1	 	 	18	4
46	6/11/15	JG/AJ		3:00					11 3.		15.9 60		0.00	0.00 On-Spec	 	1	1	1	1	24	5
47	6/13/15	PS		15:00			22 1		7 5.		6.5 2		0.80	0.00 On-Spec				1	1	17	7
48	6/16/15	JG/KM		11:10			37	4	102 6.				0.17			<u> </u>	1	1	1	18	7
49	6/17/15	JG		16:55			05	ol	174 9.				0.00		İ	1	1	1	1	6	7
50	6/19/15	JF		6:00				2	19 0.		0.4 5		1.19			İ	1			20	6
51	6/20/15	AJ		15:00					8 0.		0.1 5		1.46							23	6
52	6/22/15	JF		10:30				7	78 7.		0.1 5		0.35	0.00 On-Spec						26	3
53	7/2/15	JF		23:45				0	11 0.		0.1 3	7.4	0.00	0.00 On-Spec						21	7
54	7/4/15	KLM		3:38		8 9	81	0	11 11.	3 N	0.6	0.0	0.00	0.00 On-Spec						26	4
55	7/5/15	AJ		20:45			91	0	6 0.	9 N	0.2 4	6.2	0.00	0.00 On-Spec						24	6

Pittsburg, California

Chlorinolysis Train 1 2015 T-1002 Transfers and Analytical

Analytical Data on Stream going from T-1001 to T-1002

	rge a tigrara sagar a agr	CHLOR.	START EN	חו		F	тос	Bleach	Methanol	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	F	тос	Rleach	Methanol	ON/OFFSDEC	Transf. Procedure	Oper Conditions	Processing	Other Comments	Mixing	Cl2	Feed
BATCH#	DATE	OPER.	TIME TIME		OL (Gal)				(ppm)	NTII	ън Б	HASES				(lbs)	UN/OFFSPEC	Transi. Procedure	Oper. Conditions	Processing	Other Comments	wiixing		
56	7/7/15	PS/JG	9:00 15		6,475	(bbiii)	1102	(ppiii) 12		678	6.6	M	0.5		0.65		On-Spec	<u> </u>	 				(avg lb/hr)	(avg gpm)
	7/7/15	JG	10:00 15		12,580	- 3	453	12		104	0.9	NI NI			1.26				<u> </u>	+			22	3 -
57 50			16:00 22			- 2		12				N N	0.2				On-Spec						19	5
58	7/11/15	M.Rich			10,360	9	129	U			11.6	N N	0.7		0.00		On-Spec		ļ				10	6
59	7/17/15	M.Rich	2:40 7		2,035	2	499	8		48	1.0	N	0.0		0.14		On-Spec		ļ	ļ	!		23	7
60	7/19/15	KLM/JF	18:15 23		11,951	1	612	0		8	0.8	N	0.1	_	0.00		On-Spec		ļ			.	21	5
61	7/22/15	KLM / AJ		50	11,914	1	537	21		9	1.0	N	0.1		2.09		On-Spec						19	5
62	7/24/15	AJ/JF	12:50 17		10,989	5	1028	30		10	1.2	N	0.5		2.75		On-Spec						25	3
63	7/29/15	JG	18:20 23		12,155	2		20		11	1.3	<u>N</u>	0.2		2.03		On-Spec						32	4
64	8/11/15	M.Rich		:40	9,990	3		0			12.6	N	0.3		0.00		On-Spec						26	5
65	8/19/15	JG	9:30 12		12,025	1	402	5		894	1.8	N	0.1		0.50		On-Spec						23	7
66	8/22/15	AJ	4:50 9		11,422	2		20		700	1.0	N	0.2		1.91		On-Spec						16	4
67	8/25/15	JG	9:00 12	:30	5,032	4	912	0		173	10.2	N	0.2	38.3	0.00	0.00	On-Spec						20	3
68	9/1/15	AJ	17:25 21	:45	5,162	10	335	4		980	12.2	N	0.4	14.4	0.17	0.00	On-Spec						23	7
69	9/2/15	JG/JF	12:00 2	:00	11,526	10	892	45		235	1.2	N	1.0	85.8	4.33		On-Spec				1		32	4
70	9/5/15	JG	12:00 17		10,601	6		0		973	1.1	N	0.5		0.00		On-Spec	1					38	4
71	9/6/15	KLM	17:00 21		10,712	6	636	0		2111	1.3	N	0.5		0.00		On-Spec					† — —	33	6
72	9/11/15	JF	17:30 22		11,304	4	1250	21		38	2.8	N	0.3		1.98		On-Spec						44	3
73	9/14/15	JG/AJ	1:00 14		10,490	8	1259			6	2.2	N	0.7	+	0.00		On-Spec		1	1			45	3
74	9/16/15	AJ	16:45 20		9,888	7	1110	15		83	2.1	N	0.6		1.24		On-Spec		†				32	3
75	9/22/15	M.Rich	14:00 16		5,495	3	1543	10		23	4.0	N	0.1		0.05		On-Spec						31	2
76 76	9/26/15	JF/JG	16:30 18		5,661	- 5	1435	Ö	<u> </u>		2.4	N	0.0		0.00		On-Spec						34	3
77	9/30/15	JG/AJ		:20	10,823		1665	17			1.5	N	0.1		1.54		On-Spec		 					
				:00	7,585		1200	24												+		ļ	38	3
78	10/5/15	JG								+	1.6	N	0.1		1.52		On-Spec	1		1		1	34	3
79	10/6/15	M.Rich/JF	13:05 15		5,550		1282	24			1.4	N N	0.0		1.11		On-Spec					<u> </u>	45	4
80	10/10/15	JF JF	14:35 17		6,882	. 1	1363	24			1.7	N	0.1		1.38		On-Spec						37	3
81	10/12/15	JF	19:55 21		3,682	1	1498	24			1.6	<u>N</u>	0.0		0.74		On-Spec					<u> </u>	40	3
82	10/14/15	JF/JG		:20	10,712		1181	29		+	1.7	N	0.5		2.59		On-Spec					1	36	3
83	10/16/15	JG/AJ	3:15 13		12,414	6		16		14	1.8	Ŋ	0.7		1.66		On-Spec						38	4
84	10/18/15	AJ	16:25 18		5,310			7		59	7.4	N	5,1		0.31		On-Spec						39	7
85	10/20/15	JG/JF	15:00 17		11,008	28		23		7	1.3	N	2.6		2.11		On-Spec						30	5
86	10/22/15	KK/JF	12:45 19		9,195	13		16		4	1.4	N	1.0		1.23		On-Spec			<u> </u>			39	6
87	11/3/15	JF		:15	5,717	9		0		14	1.2	N	0.0		0.00		On-Spec						32	5
88	11/5/15	JF	17:42 22		10,767	1	000	35		10	1.0	N	0.1		3.14		On-Spec]		40	6
8 9	11/9/15	AJ/KLM		:35	10,027	4	709	0		9	1.1	N	0.4		0.00		On-Spec						35	6
90	11/12/15	JF	10:45 13	:55	7,308	2	407	15		6	1.1	N	0.	24.8	0.91	0.00	On-Spec						21	7
91	11/14/15	AJ	20:35 22	:15	3,645	1	319	17		6	1.2	Ñ	0.0	9.7	0.52		On-Spec					T	5	7
92	11/16/15	PS	14:00 17	:00	6,512	8	82	10		50	12.0	N	0.5	4.5	0.54		On-Spec						25	7
93	11/19/15	JF	6:35 11	:25	10,841	3	541	14		13	1.1	N	0.2	48.9	1.27		On-Spec		1	1			25	7
94	11/21/15	JF	18:45 23		10,305	2	-	18		8	1.1	N	0.1		1.55		On-Spec			1		1	27	7
95	11/22/15	JF	16:40 21		10,878	4		37		4	1.6	N	0.4				On-Spec			1		 	29	7
96	11/24/15	JG	17:30 23		10,730	5		19		7	1.1	N	0.4				On-Spec			1		 	13	7
97	11/25/15	AJ	13:50 18		10,256					389	5.8	N	2.4				On-Spec		†	1	<u> </u>	1	13	7
98	12/3/15	AJ	15:20 20		10,915	2				11	1.7	N	0.2				On-Spec	 	+	 		 	26	7
99	12/9/15	KLM/JG	16:05 20		8,051	5			 		1.4	N	0.3			0.00	On-Spec		†	 		1	21	7
100	12/13/15	AJ	17:50 19		4,644		83		 		11.8		0.0				On-Spec		+	+		+	5	7
101	12/13/15	JF	8:50 12		5,291	1	303				1.1	N	0.0				On-Spec		+	 		\vdash		7
102	12/14/15	-	14:00 19		12,025	+	494				1.2	N	0.				On-Spec	+	+	 	 	-	15	
		•																+				 	24	7
103	12/23/15	AJ	2:00 7		10,471	1	437			10		N N	0.				On-Spec	_		1			22	7
104	12/24/15	JG/JF	14:50 19		10,952	3				1 /	1.2	<u>N</u>	0.0				On-Spec	ļ	 	 	 	<u> </u>	17	7
105		JG & KLM			12,099					44	6.6	N	1.				On-Spec			1		Ļ	6	7
106	12/27/15	KLM	9:45 13		8,473						7.9	N	0.5				On-Spec		1		<u></u>		8	7
107	12/28/15	KLM/JG	14:20 19	:25	11,637	3	355	25		46	1.2	N	0.0	34.5	2.43	0.00	On-Spec						17	7

CONFIDENTIAL BUSINESS INFORMATION Chlorinolysis Train 1 2016 T-1002 Transfers and Analytical

Analytic	cal Data	on Stre	am goi	ing f	rom T-	1001	to T-	1002																	
		CHLOR.	START	END		Γ-	T-00	Bleach	Methanol	— Т	- т			T00	Bloom	Tag_45	1	OMOSEODEO	T (5)	lo o :::	In :	leu e :	T		T
BATCH#	DATE	OPER.			VOL (Gal)			(ppm)	(ppm)	NTU	рН	2 PHASES	F (LBS)	TOC (LBS)	Bleach (LBS)			ON/OFFSPEC	Transf. Procedure	Oper. Conditions	Processing	Other Comments	Mixing	Cl2 (avg lb/hr)	Feed (avg gpm)
1	1/2/16	M.Rich		7:30	3,423			0			11.9	N	0.4					On-Spec						7	7
2	1/2/16	JG		2:00	11,674		329	16	<u> </u>	36	1.1	N	0.2		1.5		0.00	On-Spec						19	7
3	1/7/16	JF		23:55	12,525	1 1	336	0		23	1.3	N N	0.1		0.0			On-Spec					ļ	18	7
4	1/8/16	JG/JF JG/JF		15:00	10,730	1 1	331	8		10	1.4	N	0.1	29.6	0.7			On-Spec						18	7
5 6	1/9/16	KLM/JG		15:00 20:15	11,304 11,711	 	280	16	<u>, </u>	14	1.3	N N	0.1		0.8 1.5			On-Spec On-Spec					-	15	7
7	1/11/16 1/13/16	KLM		1:15	10,305	10	192 122		1	187	1.1 5.8	N N	0.4 0.8		0.0			On-Spec			ļ			10	7
8	1/13/16	AJ		13:10	9,454	15			<u>'</u>	71	5.8	N	1.2		0.0			On-Spec						10 6	8
9	1/15/16	KLM/AJ		8:30	11,045		204	7	,	14	1.4	N	0.2		0.4			On-Spec						10	. 7
10	1/16/16	JG/JF		20:45	11,137	2	224	10	1	- 'T	1.3	N	0.2	20.8	0.9			On-Spec						10	7
11	1/18/16	M.Rich		13:45	11,100	4	170			55	12.1	N	0.4		0.0			On-Spec			 			7	7
12	1/18/16	JG		3:30	11,137	3	147	8		19	1.2	N	0.3	13.7	0.7			On-Spec						7	7
13	1/20/16	AJ/MR	15:05		11,544	2	128	o	1	23	1.7	N	0.2		0.0			On-Spec		-	†	<u> </u>		6	7
14	1/21/16	M.Rich	20:00	1:20	11,748		137	0		16	1.6	N	0.3		0.0	ol —	0.00	On-Spec					† ···	6	7
15	1/23/16	M.Rich		2:00	6,753	28		0		179	11.6	N	1.5		0.0			On-Spec						4	7
16	1/24/16	JF	17:45	22:56	11,766	1	117	10		80	1.5	N	0.1		0.9		0.00	On-Spec						5	7
17	1/26/16	KLM/JG	11:37	16:45	11,618	3	159	11		90	1.4	N	0.3	15.4	1.0	7		On-Spec				-		5	7
18	1/28/16	ĄJ		12:20	7,326	2	124	7	'	7	1.4	N	0.1	7.6	0.4	3		On-Spec						5	7
19	1/30/16	AJ	18:30		11,748		164	7	'	20	1.3	N	0.1	16.1	0.6		0.00	On-Spec						6	7
20	2/2/16	JG		14:00	11,822	6	245	20		22	1.4	N	0.6		1.9			On-Spec						8	7
21	2/8/16	AJ		2:25	12,950	1	305	12	2	17	1.2	N	0.1	33.0	1.3		0.00	On-Spec						11	7
22	2/18/16	JG/JF	15:55		10,231	3	480	0)	44	1.3	N	0.3	41.0	0.0		0.00	On-Spec						16	7
23	2/21/16	M.Rich		4:00	9,620	3	72	6		205	10.6	N	0.2		0.4		0.00	On-Spec						7	. 7
24	2/22/16	AJ		16:20	11,470	4	233	0		48	1.3	N	0.4		0.0			On-Spec						10	7
25	2/26/16	JG		13:30	8,880	1	356	32	· · · · · · · · · · · · · · · · · · ·	362	1.1	N	0.1	26.4	2.3	7		On-Spec						11	7
26	2/28/16	KLM/JG		11:36	10,571	2	360	19	 	83	1.1	N	0.1	31.8	1.6		0.00	On-Spec						10	7
27	3/1/16	AJ		9:40	11,563		305	17	 	115	1.2	N N	0.1	29.4	1.6			On-Spec			~			8	7
28	3/4/16	JF		17:35	12,099		337	10	1	10	2.0	N	0.2		1.0			On-Spec						14	7
29	3/5/16	AJ		0:35	11,119		360	13		10	1.0	N N	0.1	33.4	1.2			On-Spec						12	7
30 31	3/6/16 3/7/16	JG JG	19:45	0:15	10,915 11,100	3	297 192	10)	24 10	1.4	N N	0.3		0.0		0.00	On-Spec On-Spec						14	7
32	3/9/16	M.Rich		5:10	10,545	- '	192	10	<u> </u>	10	7.1	N	0.1		0.9	3	0.00	On-Spec						8	7
33	3/10/16	AJ/JF		9:25	11,664		213		1	10	1.7	N	0.2		0.7			On-Spec						8	7
34	3/10/16	JG		14:15	11,285		145		<u> </u>	ig	1.8	N	0.2	13.7	0.7			On-Spec					 	8 6	7
35	3/13/16	JG/JF		19:22	11,507	1	159		<u> </u>	귀	1.8	N	0.1	15.3	0.7			On-Spec						8	7
36	3/14/16	KLM/JG		1:45	9,990	2	45	1 0	<u> </u>	21	10.8	N	0.1					On-Spec						5	7
37	3/15/16	JG		1:30	11,840		170		1		1.7	N	0.2					On-Spec						5	7
38	3/17/16	JG		5:10	11,840				1		1.6	N	0.2					On-Spec						9	7
39	3/19/16	JF	11:30	13:45	9,639		63		 		11.6	N	0.1		0.5			On-Spec		1				3	7
40	3/19/16	AJ/JG	22:25	3:40	12,007		300				1.5	N	0.1		1.4			On-Spec						11	7
41	3/24/16	JG	4:30	9:40	12,210		317				1.4	N	0.1	32.3	1.1:			On-Spec						12	7
42	3/25/16	GV/MR	16:40		11,100	5	138		;		8.1	N.	0.5	12.8				On-Spec						5	7
43	3/27/16	JF	8:00	13:00	11,267	8	373	9			1.4	N	0.8		0.8			On-Spec						16	7
44	3/30/16	JG	0:15	5:00	11,840		424	16		6	1.3	N	0.1	41.9	1.5			On-Spec						17	7
45	4/1/16	KLM	23:59	3:40	9,768	10					3.0	N	0.8			3	0.00	On-Spec						7	7
46	4/5/16	JG	12:55		12,136		391				1.3	N	0.1	39.6	2.1	3	0.00	On-Spec						17	7
47	4/6/16	JG/JF	13:35	18:15	11,341	1	530	15		6	1.3	N	0.1	50.2	1.4	2	0.00	On-Spec							